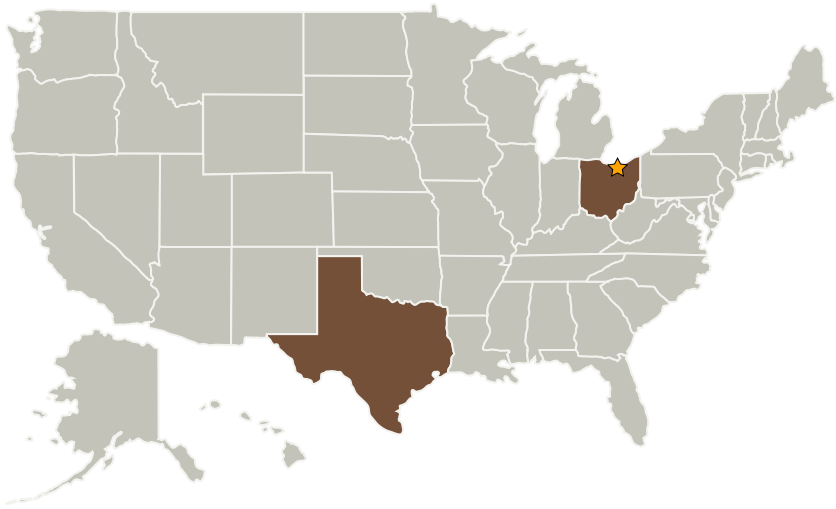
Integrated Data Assimilation Architecture, Phase II

Completed Technology Project (2007 - 2009)

Project Introduction

The Integrated Data Assimilation Architecture (IDAA) addresses the fundamental problem of command, control, and communications systems interoperability. Interoperability of Explorations systems is necessary to improve reliability, reduce complexity, increase software and hardware reusability, and enable multi-developer / multi-agency support. The IDAA architecture consists of a software component, the BioNet middleware, and a hardware component, a Mobile Data Acquisition and Communications processing System (MDACS). Development and advancement of the BioNet middleware was the primary focus of the Phase I STTR effort. Continued BioNet middleware development will occur as a proposed Phase II activity along with the development of the MDACS generic hardware platform. From a functional perspective, the BioNet middleware provides a standards-based command and control capability, while the MDACS provides a generic space-rated hardware platform for general-purpose computations and communications.

Primary U.S. Work Locations and Key Partners



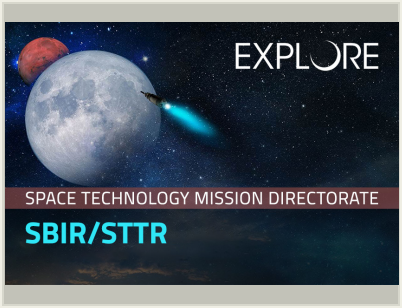


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Table of Contents

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Glenn Research Center (GRC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Glenn Research Center(GRC)	Lead Organization	NASA Center	Cleveland, Ohio
Invocon, Inc.	Supporting Organization	Industry Veteran-Owned Small Business (VOSB)	Conroe, Texas

Primary U.S. Work Locations	
Ohio	Texas

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX09 Entry, Descent, and Landing
  - TX09.4 Vehicle Systems
    - TX09.4.1 Architecture Design and Analysis